

HISTORIC AMERICAN ENGINEERING RECORD

INDEX TO PHOTOGRAPHS

HAER
OHIO
50-YOUNG-
48-

REPUBLIC IRON AND STEEL COMPANY,
YOUNGSTOWN WORKS, BLOOMING MILL
AND BLOOMING MILL ENGINES
40" Blooming Mill
Youngstown
Mahoning County
Ohio

HAER No. OH-63-B

Jay Williams, Photographer, 1988

- OH-63-B-1 EXTERIOR OF ENGINE ROOM, CONTAINING UNITED-TOD
TWIN-TANDEM ENGINE, FOR 40" BLOOMING MILL
- OH-63-B-2 EXTERIOR OF ENGINE ROOM, CONTAINING MESTA-CORLISS
CROSS-COMPOUND ENGINE, FOR 40" BLOOMING MILL
- OH-63-B-3 GENERAL VIEW OF REMAINS OF 40" BLOOMING MILL; THE
ENGINE ROOM CONTAINING THE MESTA-CORLISS STEAM
ENGINE, IS LOCATED AT THE FAR END OF THE MILL AS
SEEN TO THE FAR RIGHT (THE BUILDING WITH THE SHED
ROOF).
- OH-63-B-4 INTERIOR OF ENGINE ROOM, CONTAINING UNITED-TOD
TWIN-TANDEM ENGINE, FOR 40" BLOOMING MILL; AS SEEN
FROM THE UPPER LEVEL BRIDGE CRANE, THIS ENGINE WAS
THE DIRECT DRIVE TO THE 40" BLOOMING MILL LOCATED
IN THE ADJACENT ROOM TO THE LEFT. THE UNITED-TOD
ENGINE, A TWIN TANDEM COMPOUND STEAM ENGINE, WAS
RATED AT 20,000 HP. IN 1946 NEW HIGH-PRESSURE
CYLINDERS WERE INSTALLED AND THE ENGINE RAN ON 200
PSI STEAM, WITH A 44" X 76" X 60" STROKE, TO A
BUILT-UP COUNTER-BALANCED CENTER CRANK.
- OH-63-B-5 GENERAL VIEW OF UNITED-TOD TWIN-TANDEM STEAM
ENGINE.
- OH-63-B-6 DETAIL OF UNITED-TOD TWIN-TANDEM STEAM ENGINE,
SHOWING CRANK END OF LOW PRESSURE SIDE OF ENGINE.
- OH-63-B-7 DETAIL OF UNITED-TOD TWIN-TANDEM STEAM ENGINE,
SHOWING CYLINDER AND CROSS HEAD OF PISTON AT THE
LOW PRESSURE SIDE OF ENGINE.
- OH-63-B-8 DETAIL OF UNITED-TOD TWIN-TANDEM STEAM ENGINE,
SHOWING CYLINDER AND CROSS HEAD OF PISTON AT THE
HIGH-PRESSURE SIDE OF ENGINE.
- OH-63-B-9 DETAIL OF UNITED-TOD TWIN-TANDEM STEAM ENGINE,
SHOWING HIGH-PRESSURE CYLINDER AND EXTENSION OF
HOUSING.

REPUBLIC IRON AND STEEL COMPANY,
YOUNGSTOWN WORKS, BLOOMING MILL
HAER No. OH-63-B (Page 2)

- OH-63-B-10 DETAIL OF UNITED-TOD TWIN-TANDEM STEAM ENGINE, AS SEEN FROM HIGH-PRESSURE SIDE OF ENGINE (SPARE CRANK WAS KEPT AT THIS END)
- OH-63-B-11 DETAIL OF UNITED-TOD TWIN-TANDEM STEAM ENGINE, SHOWING HIGH-PRESSURE CYLINDER AND VALVE, AND LUBRICATING EQUIPMENT FOR ENGINE.
- OH-63-B-12 GENERAL VIEW OF UNITED-TOD TWIN-TANDEM STEAM ENGINE, AS SEEN FROM WALKWAY ALONG WALL, ON THE OTHER SIDE OF WHICH STOOD THE 40" BLOOMING MILL
- OH-63-B-13 INTERIOR OF ENGINE ROOM, CONTAINING MESTA-CORLISS CROSS-COMPOUND ENGINE, FOR 40" BLOOMING MILL. THIS VIEW HIGHLIGHTS THE CRANK AND 24' DIAMETER FLYWHEEL.
- OH-63-B-14 INTERIOR OF ENGINE ROOM, CONTAINING MESTA-CORLISS CROSS-COMPOUND ENGINE, FOR 40" BLOOMING MILL. THIS VIEW HIGHLIGHTS THE CRANK AND 24' DIAMETER FLYWHEEL. THE ENGINE IS A 7,940 HP MESTA-CORLISS CROSS-COMPOUND STEAM ENGINE ITS BORE AND STROKE ARE 32" X 84" X 60". NOTE FLY BALL GOVERNOR ON ENGINE. MILL DRIVE SHAFT ATTACHED TO PULLEY ON LOCATED ON CRANK.
- OH-63-B-15 INTERIOR OF ENGINE ROOM, CONTAINING MESTA-CORLISS CROSS-COMPOUND ENGINE, FOR 40" BLOOMING MILL; THIS VIEW IS TAKEN FROM THE HIGH-PRESSURE SIDE OF THE ENGINE SHOWING THE HOUSING EXTENSION; TO THE RIGHT, IN THE BACKGROUND, IS THE 24' CAST-IRON FLYWHEEL.
- OH-63-B-16 INTERIOR OF ENGINE ROOM, CONTAINING MESTA-CORLISS CROSS-COMPOUND ENGINE, FOR 40" BLOOMING MILL; THIS VIEW IS TAKEN FROM THE HIGH-PRESSURE SIDE OF THE ENGINE SHOWING THE SERVICE PLATFORM